# WEST Search History

DATE: Friday, August 08, 2003

| Set Name side by side | Query | Hit Count | Set Name result set |
|---|---|---|---|
| *DB=USPT; PLUR=YES; OP=OR* | | | |
| L5 | L3 and (pathogen same susceptibility) | 75 | L5 |
| L4 | L3 and (pathogen same susceptible) | 83 | L4 |
| L3 | L2 and mutat$3 | 1784 | L3 |
| L2 | L1 or C same elegans | 6447 | L2 |
| L1 | nematode | 5554 | L1 |

END OF SEARCH HISTORY

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FILE 'HOME' ENTERED AT 13:10:11 ON 08 AUG 2003

=> medline biosis embase agricola scisearch caplus
MEDLINE IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> file medline biosis embase agricola scisearch caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'MEDLINE' ENTERED AT 13:10:37 ON 08 AUG 2003

FILE 'BIOSIS' ENTERED AT 13:10:37 ON 08 AUG 2003
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=> s nematode
L1        98424 NEMATODE

=> s l1 and mutagen?
L2          690 L1 AND MUTAGEN?

=> s MAPK
L3        37796 MAPK

=> s l3 and esp-2
L4            0 L3 AND ESP-2

=> s l3 and esp-8
L5            1 L3 AND ESP-8

=> s l3 and pmk-1
L6           11 L3 AND PMK-1

=> s l6 and l2
L7            1 L6 AND L2

=> s l5 and l2
L8            1 L5 AND L2

=> dup rem
ENTER L# LIST OR (END):l6
PROCESSING COMPLETED FOR L6
L9            5 DUP REM L6 (6 DUPLICATES REMOVED)

=> d l9 tot ibib abs
```

L9 ANSWER 5 OF 5 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001652695 MEDLINE
DOCUMENT NUMBER: 21561224 PubMed ID: 11703092
TITLE: Isolation and characterization of **pmk**-(1-3): three p38 homologs in Caenorhabditis elegans.
AUTHOR: Berman K; McKay J; Avery L; Cobb M
CORPORATE SOURCE: Department of Pharmacology, University of Texas Southwestern Medical Center at Dallas, 5323 Harry Hines Boulevard, Dallas, TX 75390, USA.
CONTRACT NUMBER: GM 53032 (NIGMS)
HL 46154 (NHLBI)
SOURCE: MOLECULAR CELL BIOLOGY RESEARCH COMMUNICATIONS, (2001 Nov) 4 (6) 337-44.
Journal code: 100889076. ISSN: 1522-4724.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20011114
Last Updated on STN: 20021015
Entered Medline: 20020130



AB p38, a member of the mitogen-activated protein kinase (**MAPK**) superfamily, is activated in response to a variety of cellular stresses and ligands. Since the genome of the nematode C. elegans has been sequenced, we sought to identify and characterize the nematode homolog of mammalian p38. By sequence analysis and RT-PCR, we isolated cDNAs encoding three kinases, **PMK-1**, PMK-2, and PMK-3, which we call p38 map kinases due to their high sequence identity with p38. The three genes are contiguous on chromosome IV and comprise an operon. By use of a GFP reporter, we found that the promoter of the pmks is active throughout the intestine. An active form of **MAPK**/ERK kinase 6 (MEK6) phosphorylated and activated recombinant **PMK-1** and PMK-2 in vitro. **PMK-1** and PMK-2 phosphorylated activating transcription factor-2 (ATF-2), indicating an activity similar to mammalian p38. When transfected into mammalian cells, these kinases, like p38, are stimulated by osmotic stresses.

L20 ANSWER 24 OF 34 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
ACCESSION NUMBER: 1999:283047 SCISEARCH
THE GENUINE ARTICLE: 184CL
TITLE: Organization and regulation of mitogen-activated protein kinase signaling pathways
AUTHOR: Garrington T P (Reprint); Johnson G L
CORPORATE SOURCE: NATL JEWISH MED & RES CTR, DIV BASIC SCI, PROGRAM MOL SIGNAL TRANSDUCT, 1400 JACKSON ST, DENVER, CO 80206 (Reprint); CHILDRENS HOSP, DEPT PEDIATR HEMATOL ONCOL, DENVER, CO 80218
COUNTRY OF AUTHOR: USA
SOURCE: CURRENT OPINION IN CELL BIOLOGY, (**APR 1999**) Vol. 11, No. 2, pp. 211-218.
Publisher: CURRENT BIOLOGY LTD, 34-42 CLEVELAND STREET, LONDON W1P 6LE, ENGLAND.
ISSN: 0955-0674.
DOCUMENT TYPE: General Review; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 58

Adonis

*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB Mitogen-activated protein kinases (MAPKs) are components of a three kinase regulatory cascade. There are multiple members of each component family of kinases in the **MAPK** module. Specificity of regulation is achieved by organization of **MAPK** modules, in part, by use of scaffolding and anchoring proteins. Scaffold proteins bring together specific kinases for selective activation, sequestration and localization of signaling complexes, The recent elucidation of scaffolding mechanisms for **MAPK** pathways has begun to solve the puzzle of how specificity in signaling can be achieved for each **MAPK** pathway in different cell types and in response to different stimuli. As new **MAPK** members are defined, determining their organization in kinase modules will be critical in understanding their select role in cellular regulation.

L9 ANSWER 2 OF 5 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2003020540 IN-PROCESS
DOCUMENT NUMBER: 22414944 PubMed ID: 12526744
TITLE: Caenorhabditis elegans Innate Immune Response Triggered by Salmonella enterica Requires Intact LPS and Is Mediated by a **MAPK** Signaling Pathway.
AUTHOR: Aballay Alejandro; Drenkard Eliana; Hilbun Layla R; Ausubel Frederick M
CORPORATE SOURCE: Department of Genetics, Harvard Medical School and Department of Molecular Biology, Massachusetts General Hospital, 02114, Boston, MA, USA.
SOURCE: CURRENT BIOLOGY, (2003 Jan 8) 13 (1) 47-52.
Journal code: 9107782. ISSN: 0960-9822.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20030116
Last Updated on STN: 20030116

AB Compared to mammals, insects, and plants, relatively little is known about innate immune responses in the nematode Caenorhabditis elegans. Previous work showed that Salmonella enterica serovars cause a persistent infection in the C. elegans intestine that triggers gonadal programmed cell death (PCD) and that C. elegans cell death (ced) mutants are more susceptible to Salmonella-mediated killing. To further dissect the role of PCD in C. elegans innate immunity, we identified both C. elegans and S. enterica factors that affect the elicitation of Salmonella-induced PCD. Salmonella-elicited PCD was shown to require the C. elegans homolog of the mammalian p38 mitogen-activated protein kinase (**MAPK**) encoded by the **pmk-1** gene. Inactivation of **pmk-1** by RNAi blocked Salmonella-elicited PCD, and epistasis analysis showed that CED-9 lies downstream of **PMK-1**. Wild-type Salmonella lipopolysaccharide (LPS) was also shown to be required for the elicitation of PCD, as well as for persistence of Salmonella in the C. elegans intestine. However, a presumptive C. elegans TOLL signaling pathway did not appear to be required for the PCD response to Salmonella. These results establish a **PMK-1**-dependant PCD pathway as a C. elegans innate immune response to Salmonella.